UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,022	12/28/1999	HIROSHI UENO	046982/0112	9495

44987	7590	12/12/2005	

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EXAMINER
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ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/473,022	UENO, HIROSHI
	Examiner	**Art Unit**	
	Raj Jain	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *20 October 2005*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-3, 7 and 9-12* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-3, 7 and 9-12* is/are rejected.

7) ☒ Claim(s) *4* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some *   c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7, and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated

by Nagamoto (US006163528A).

Regarding claim 1, Nagamoto discloses a multiplexing apparatus (see Fig. 1,

abstract) for connection to an switching unit (1) and to each of plural subscribers

(HWIN-1 to – N) through communication lines and performing multiplexing processing of

cells sent from the plural subscribers, the multiplexing apparatus comprising:

- detection means (13) for detecting a congestion state corresponding to received

cells from the subscribers and outputting a level value corresponding to the congestion

state, said level value indicating an amount of congestion (see Fig. 1, col 1 lines 39- 46,

col 2 lines 60-64, the cell threshold detector 13, detects the congestion and outputs a

signal indicative of the amount of congestion back to the read controller 23 of each input

buffer 2).

- and discard means for selectively discarding the received cells from the

subscribers based on a communication state determined by   cells received from the

switching unit and cells received from the subscribers and based on the level value of

the congestion state (see Fig. 2, col 2 lines 45-66, col 3 lines 46-55, the selective cell

discard controllers (PD), determine which packet is to be discarded based on

predetermined criteria such as QoS, bit rate etc., see col 4 line 7 – col 5 line 40. One

discard method is simply the overflow of cell buffers and therefore congestion limitations

of a system see col 4 line 15.)

Regarding claim 2, Nagamoto discloses a general multiplexing apparatus, which

incorporates within each cell by default header information that is identified in the form

of VPI/VCI values indicative of source and destination addresses, one skilled in the art

will appreciate that a given system updates its queues and switches based on received

packets based on its header information, thus the examiner takes official notice that

updating of queues is well known in the arts of switching and monitoring and thus the

updating and having "first" and or second header information is obvious as the VPI/VCI

values would change with each new subscriber location where the packet arrives at,

and where the packet may be directed to go from there.

Regarding claim 3, Nagamoto discloses a detection means (see 13 of Fig. 1, col

1 lines 39-45, col 2 line 60) and a comparison means to indicate degree of occupancy

(see col 4 lines 34 – 44).

Regarding claim 7, Nagamoto discloses discard means based on preset logic

(see Fig. 2, col 2 lines 45-66, col 3 lines 46-55, the selective cell discard controllers

(PD), determine which packet is to be discarded based on predetermined criteria such

as QoS, bit rate etc., see col 4 line 7 – col 5 line 40).

Regarding claim 9, Nagamoto discloses a method of discarding cells comprising :

-receiving cells sent from subscribers and detecting a congestion state of the

received cells from the subscribers (see Fig. 1, subscribers HWIN send the cells to the

switch 1, congestion is detected by 13 the cell threshold detector),

-updating a communication state determined based on the received cells from

the subscribers and based on received cells from an switching unit (see Fig. 1, col 2

lines 45-64, once the threshold state is determined for each queue, the congestion state

is fed back to the read controller 23 of input buffer 1 which modifies or updates its

transfer status accordingly),

-deciding to obtain a decision result, whether discard processing of the received

cells from the subscribers is performed on the basis of the updated communication state

data and a level value of a signal indicating the congestion state, said level value

indicating an amount of congestion, and selectively performing the discard processing

on the basis of the decision result (see Fig. 1, col 1 lines 39- 46, col 2 lines 60-64, the

cell threshold detector 13, detects the congestion and outputs a signal indicative of the

amount of congestion back to the read controller 23 of each input buffer 2, based on

preset logic criteria's a decision is made whether to discard the cell or not see Fig. 2, col

2 lines 45-66, col 3 lines 46-55, the selective cell discard controllers (PD), determine

which packet is to be discarded based on predetermined criteria such as QoS, bit rate

etc., see col 4 line 7 – col 5 line 40.).

Regarding claim 10, Nagamoto discloses a (asynchronous transfer mode)

multiplexing device comprising (see Fig 1, abstract)

-a discard control component (PDs see Fig. 2) configured to maintain

communication state information determined based oh header data of cells received

from an switch and a subscriber (see col 3 lines 45-60, each discard controller

performs selective cell discard based on preset logic criteria's as determined by the

user see col 4 lines 7-57), and

-a detection component including (13, Fig 1) a queue (22) for storing cells from

the subscriber, and a comparison (see col 4 lines 34 – 44 comparison means to indicate

degree of occupancy) component configured to compare a degree of occupancy of the

queue to a threshold to obtain a congestion level corresponding to an amount of

congestion of the queue, wherein the discard control component selectively discards

cells received from the subscriber based on the congestion level and the

communication state information (see Fig. 2, PDs, col 4 lines 7-57, where PDs perform

selective cell discard based on preset logic criteria's as determined by the user see col

4 lines 7-57).

Regarding claim 11, Nagamoto discloses plurality of discard components (PDs,

Fig. 2) and plurality of detection components (13, Fig. 1) where one PD and one

detection component is assigned to each subscriber (HWIN-1 to - N) respectively (see

col 2 line 64 – col 3 line 5).

Regarding claim 12, Nagamoto discloses plurality of thresholds based on each

individual subscriber (HWIN-1 to -N) (see col 2 lines 36-44, col 2 line 64 – col 3 line 5).

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 10/20/05 with respect to claims 1-3, 7, 9-12 have

been fully considered but they are not persuasive.

With respect to claims 1 & 9, applicant contends Nagamoto fails to disclose or

suggest "*the discard means recited in claim 1, which selectively discards the received*

cells from the subscribers based on a communication state determined by cells received

from the switching unit", and further *with respect to claim 9 Nagamoto fails to disclose or*

suggest discarding means based on a communication state and a level value of a signal

indicating a congestion state."

Examiner respectfully disagrees, Nagamoto discloses a "discard means" see Fig.

2, col 2 lines 45-66, col 3 lines 46-55, the selective cell discard controllers (PD),

determine which packet is to be discarded based on predetermined criteria such as

QoS, bit rate etc., see col 4 line 7 – col 5 line 40, this in turn would imply that the discard

is done "selectively". Applicant further contends "...B*asing a cell discard operation on a*

congestion state and/or the service class of cells, as disclosed by Nagamoto, does not

reasonably correspond to the discard means recited in claim 1, which selectively

discards the received cells from the subscribers based on, among other things..".

Applicant does not state what other things are considered in selective discard, and

therefore the examiner believes that these other things to be one or more the criteria's

listed above and therefore Nagamoto does in fact disclose "selective discard". With

respect to the "communication state" discard means is one aspect of the total

communications system and furthermore applicant also states (page 3 of specs)

The discard processing is desirably performed on the basis of a logical decision

using a plurality of data providing the use state (communication state) of the connection

and level information of the congestion state.

The "use state" within this statement would construe to mean the actual usage of

the communications network which in part would also include the congestion state and

in turn the overall "communication state" of the network. And a level value as recited in

claim 9 is the threshold value determined for each buffer, controlling the congestion

state of the buffers. Thus the congestion state inherently incorporates the overall

communications state of a network, therefore by default Nagamoto does disclose the

recited limitations of claims 1 & 9 and therefore claims 1 & 9 stand rejected.

With respect to claim 2, examiner has taken official notice with regards to

updating of header information within cells traversing a network and therefore applicant

is advised to see the following references accordingly (US 6452905 B1, US 6222823

B1).

With respect to claim 10, applicant contends here in part

"Nagamoto, does not disclose or suggest a multiplexing device including a discard control component configured to maintain communication state........" ......"the discard control component selectively discarding cells received from the subscriber based on the congestion level".

Examiner respectfully disagrees, Nagamoto discloses a multiplexing device (see Fig. 1 and abstract), as for selective discard, arguments are same as for claims 1 and 9 and applicant is advised to review the same, and thus since Nagamoto does in fact disclose all recited limitations of claim 10, therefore claim 10 stands rejected.

Claims 11 and 12 properly rejected under cited art above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax number for the organization where this application is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

RJ

December 1, 2005

Ajit Patel
Primary Examiner